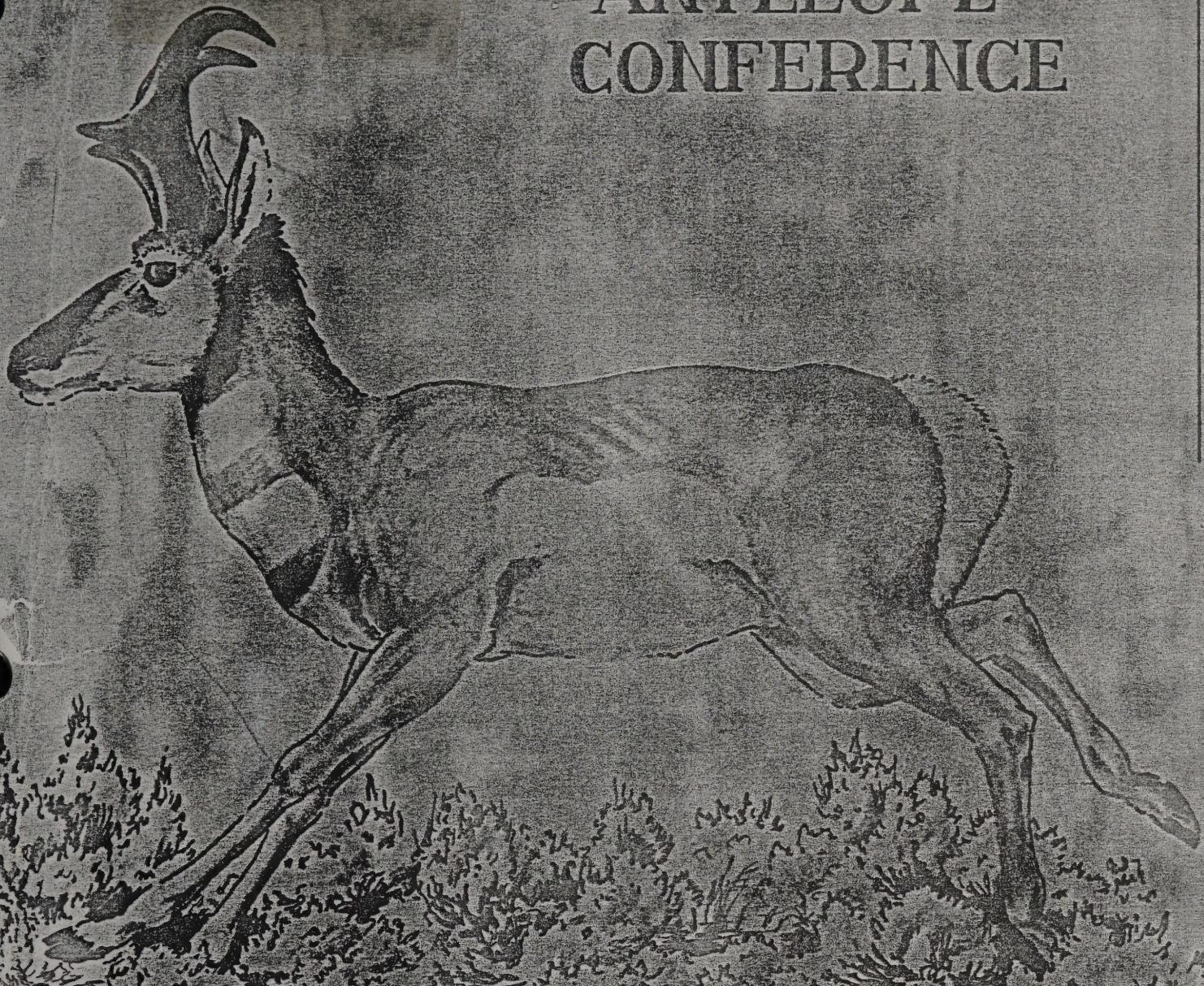


BLM LIBRARY



88006377

# INTERSTATE ANTELOPE CONFERENCE



QL

737

.U5

I57

196

QL

737

.U52

I57

1965

1965

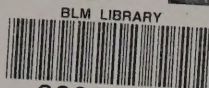
transactions



11/11/11  
11/11/11  
11/11/11







88006377

# INTERSTATE ANTELOPE CONFERENCE



QL  
737  
.U52  
I57  
1965

1965

transactions



RECEIVED  
JAN 11 1964  
U.S. DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C.



#1287024977

84006377

QL  
737  
.052  
157  
1965

INTERSTATE ANTELOPE CONFERENCE

1965 TRANSACTIONS

ATTENDANCE ROSTER  
ANNUAL MEETING  
FORMAL PAPERS PRESENTED AT  
THE SIXTEENTH ANNUAL MEETING ARE  
INCLUDED IN THESE TRANSACTIONS.  
THE MEETING WAS HELD IN  
LAKEVIEW, OREGON ON JANUARY 18, 1966

COMPILED BY LEO PYSHORA

APRIL 1966

Interstate Antelope Conference Transactions are published annually and copies are available by writing to the Interstate Antelope Conference, P. O. Box 1480, Redding, California 96002, c/o Leo Pyshora. Due to the limited number of transactions published, copies will not be available to other than conference members directly concerned with the antelope herds involved.

Bureau of Land Management  
Library  
Bldg. 50, Denver Federal Center  
Denver, CO 80225



100-100000  
100-100000  
100-100000  
100-100000

INTERNATIONAL TRANSACTIONS

1955 TRANSACTIONS

FOR THE YEAR 1955  
THE FOLLOWING TRANSACTIONS ARE  
INCLUDED IN THIS SUMMARY  
THE MONTH OF JANUARY 1955  
HARRIS, GEORGE W. JANUARY 10, 1955

COMPILED BY LEE PETERSON

APRIL 1955

International Transactions are published  
annually and are available by writing to the Inter-  
state Airports Conference, P. O. Box 1400, Berkeley, California  
94701. For the latest order of trans-  
actions published, copies will not be available to other  
than conference members directly concerned with the airports  
being involved.

Bureau of Land Management  
Library  
Bldg. 50, Denver Federal Center  
Denver, CO 80225



# ATTENDANCE ROSTER 1963 INTERSTATE ANTELOPE COMMITTEE MEETING NATURAL RESOURCES January 18, 1969 TABLE OF CONTENTS

## ATTENDANCE ROSTER

## ANNUAL REPORTS

California Antelope Report  
by Robert Payton

Nevada Antelope Studies  
by William W. Foree

Oregon Antelope Report  
by Ira D. Luman

Antelope Status Report for the Sheldon-Hart  
Mountain Antelope Refuges  
by John D. Hill



TABLE OF CONTENTS

ATTENDANCE LIST

ANNUAL REPORT

California American Report  
by Robert Brown

Illinois American Report  
by William W. Brown

Oregon American Report  
by Lee G. Brown

Michigan American Report for the Session-1911  
by John G. Hill



ATTENDANCE ROSTER

1965 INTERSTATE ANTELOPE COMMITTEE MEETING

LAKEVIEW, OREGON

January 18, 1966

<u>NAME</u>	<u>AGENCY</u>	<u>ADDRESS</u>
Annear, John T.	U.S. Bureau of Sport Fisheries and Wildlife	Tulelake, Calif.
Carter, Pete	U.S. Bureau of Sport Fisheries and Wildlife Sheldon-Hart Mtn. Refuges	Lakeview, Oregon
Foree, Bill	Nevada Fish and Game Commission	Winnemucca, Nev.
Frewing, Darrel	U.S. Forest Service Fremont National Forest	Lakeview, Oregon
Griffith, Glen	Nevada Fish and Game Commission	Lovelock, Nevada
Grogan, Frank B.	Oregon Game Commission	Lakeview, Oregon
Hiehle, Jack L.	Calif. Department of Fish & Game	Sacramento, Calif.
Hill, John D.	U.S. Bureau of Sport Fisheries and Wildlife Sheldon-Hart Mtn. Refuges	Plush, Oregon
Inma, Gaylord L.	U.S. Bureau of Sport Fisheries and Wildlife	Tulelake, Calif.
Langdon, Cecil	Oregon State Game Commission	Ontario, Oregon
Luman, Dave	Oregon Game Commission	Portland, Oregon
Mason, Ellis	Oregon Game Commission	Hines, Oregon
Masson, Vic.	Oregon Game Commission	Hines, Oregon
Nuess, William	U.S. Bureau of Sport Fisheries and Wildlife	Tulelake, Calif.



# ATTENDANCE LIST

1982 INTERSTATE ANTIPODE COMMISSION MEETING

LAFAYETTE, OREGON

January 10, 1980

NAME	AGENCY	ADDRESS
Amment, John T.	U.S. Bureau of Sport Fisheries and Wildlife	Twinsburg, Calif.
Carter, Pace	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Evans, Bill	U.S. Bureau of Sport Fisheries and Wildlife	Minneapolis, Minn.
Freeman, Harold	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Gellich, Glen	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Graham, Frank B.	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Hedrick, Jack L.	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Hill, John B.	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Irwin, Rayford L.	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Kirchman, Cecil	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Lewis, Dave	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Moore, Bill	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Nelson, Vic	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Oregon
Reese, William	U.S. Bureau of Sport Fisheries and Wildlife	Lafayette, Calif.



CALIFORNIA DEPARTMENT OF FISH AND GAME

GAME MANAGEMENT BRANCH - REGION 1

<u>NAME</u>	<u>AGENCY</u>	<u>ADDRESS</u>
Olson, William E.	Oregon Game Commission	Summer Lake, Oregon
Parker, D. Andy	U.S. Bureau of Land Management	Lakeview, Oregon
Payton, Robert C.	Calif. Department of Fish and Game	Alturas, Calif.
Pyshora, Leo	Calif. Department of Fish and Game	Redding, Calif.
Reeher, Jim	Oregon Game Commission	Ontario, Oregon
Sekora, Palmer C.	U.S. Bureau of Sport Fisheries and Wildlife	Tulelake, Calif.
Smith, A. E.	U.S. Bureau of Land Management	Sacramento, Calif.
Stanton, Frank	U.S. Bureau of Land Management	Portland, Oregon
Strawn, William	U.S. Forest Service Fremont National Forest	Lakeview, Oregon
Thayer, Douglas J.	Calif. Department of Fish and Game	Wendel, Calif.



<u>NAME</u>	<u>AGENCY</u>	<u>ADDRESS</u>
Allen, William E.	Oregon Game Commission	Forest Lake, Oregon
Barber, D. Ashy	U.S. Bureau of Land Management	Lebanon, Oregon
Boyd, Robert C.	Calif. Department of Fish and Game	Albany, Calif.
Boyd, Joe	Calif. Department of Fish and Game	Redding, Calif.
Boyd, Jim	Oregon Game Commission	Ontario, Oregon
Boyd, Robert C.	U.S. Bureau of Sport Fisheries and Wildlife	Tupelo, Calif.
Smith, A. E.	U.S. Bureau of Land Management	Sacramento, Calif.
Clinton, Frank	U.S. Bureau of Land Management	Portland, Oregon
Johnson, William	U.S. Forest Service Forests National Forest	Lebanon, Oregon
Thayer, Douglas J.	Calif. Department of Fish and Game	Woodland, Calif.



CALIFORNIA DEPARTMENT OF FISH AND GAME

GAME MANAGEMENT BRANCH - REGION 1

1965 Northeastern California Antelope Report

I. HERD SURVEYS

A. Annual Census

The annual aerial census of antelope in Northeastern California was conducted on January 12, 13, 14 and February 2, and 3, 1965.

The aerial census method used is to strip fly all winter range areas. Strip width is dependent upon visibility and snow cover conditions. Best results are obtained when the ground is entirely free of snow. During the 1965 census, the ground was completely snow covered in some areas and partly covered in other areas.

A Cessna skylane was the plane used. Single engine planes of this type have proven to be the most efficient for this work.

The 1965 census count was 2,468 antelope. This is below the 1964 census of 2,618 animals, but is well above the average for the past thirteen years.

B. Buck-Doe Ratios

Aerial herd composition counts were conducted from July 16 through 20, 1965. Methods used were similar to those used in past years, except that two observers were used instead of three.

There were 1,592 animals classified. The buck ratio was 44 per 100 does. This ratio is 3 per 100 does lower than in 1964, and is below the twelve-year average.

C. Production

The kid to doe ratio was 52 per 100 does. This is 5 per 100 below 1964 and 8 below the twelve-year average.

D. Harvest

A special, bucks only, antelope season was held. The season ran from August 21 through September 5, 1965. Two hundred forty (240) permits were issued at a state-wide drawing held in Sacramento. Two hundred (200) of the permits were for Modoc County and forty (40) for Lassen County. Bucks only, with horns longer than their ears, were legal game.



FEDERAL DEPARTMENT OF FISH AND GAME

WILDLIFE MANAGEMENT SERVICE - DIVISION 1

1955 Northwest California Antelope Report

1. AREA SURVEY

A. General Features

The general area of survey in Northwest California was conducted on January 12, 13, 14 and February 1, 2, 3, 1955.

The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.

A general survey was conducted in the area. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.

The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.

B. Survey Results

General survey results were as follows: The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.

The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.

C. Summary

The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.

D. Conclusions

A general survey was conducted in the area. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state. The survey was conducted in an area of 150,000 acres. The area is located in the northern part of the state.



One hundred and forty one (141) buck antelope were legally taken for a success ratio of fifty-nine (59) percent. No data is available to show the number of permit holders who actually hunted, since hunters were not required to check in or out of the area. In addition to the bucks legally taken, four bucks were reported killed and left in the field, and one doe was killed.

Heavy rains on the opening weekend of the season made many roads impassable to automobile travel. Some hunters were discouraged by weather and road condition and did not hunt.

Hunter success was below the seventy-six (76) percent reported for the 1964 hunt. The reason for this lower success ratio was primarily due to the access condition on opening weekend.

## II. RANGE SURVEYS

### A. Weather Conditions

Precipitation was above normal. Late spring rains resulted in improved range conditions.

### B. Range Modifications

None by the Department of Fish and Game. The Bureau of Land Management seeded several hundred acres of antelope winter range to wheatgrass in Lassen County.

### C. Range Evaluation

The past two years of above normal precipitations have resulted in improved range conditions. Browse plants have shown a marked improvement in major and annual growth.

The sage defoliator (*aroga websteri*) infestation has apparently subsided. Extensive areas of antelope range were infested with this insect, and large areas of sage were killed. The effects of this change in ground cover (feed) conditions on antelope has not been thoroughly evaluated.

Our food habits laboratory has reported on analyses of the 132 antelope rumen samples checked to date. The samples collected during the 1964 and 1965 hunts show a marked increase in the volume of forbs taken and a corresponding drop in volume of browse, when compared with samples collected in the 1942-56 period. This could indicate the effects of the *aroga* infestation, but more likely is the result of the improved range conditions resulting from increased precipitation during 1964 and 1965.



The first of the forty-one (41) cases which were legally  
closed for a period of time (1971) pursuant to the  
is available to show the number of persons who actually  
participated in the activities. It is not possible to  
determine the exact number of persons who actually  
participated in the activities. The number of persons  
who participated in the activities is not known.

There were no other persons who were reported  
to have participated in the activities. The number of  
persons who participated in the activities is not known.

There were no other persons who were reported  
to have participated in the activities. The number of  
persons who participated in the activities is not known.

# 1. Summary

## A. Summary of the activities

The first of the forty-one (41) cases which were legally  
closed for a period of time (1971) pursuant to the  
is available to show the number of persons who actually  
participated in the activities. It is not possible to  
determine the exact number of persons who actually  
participated in the activities. The number of persons  
who participated in the activities is not known.

## B. Summary of the results

There were no other persons who were reported  
to have participated in the activities. The number of  
persons who participated in the activities is not known.

## C. Summary of the conclusions

The first of the forty-one (41) cases which were legally  
closed for a period of time (1971) pursuant to the  
is available to show the number of persons who actually  
participated in the activities. It is not possible to  
determine the exact number of persons who actually  
participated in the activities. The number of persons  
who participated in the activities is not known.

The first of the forty-one (41) cases which were legally  
closed for a period of time (1971) pursuant to the  
is available to show the number of persons who actually  
participated in the activities. It is not possible to  
determine the exact number of persons who actually  
participated in the activities. The number of persons  
who participated in the activities is not known.

The first of the forty-one (41) cases which were legally  
closed for a period of time (1971) pursuant to the  
is available to show the number of persons who actually  
participated in the activities. It is not possible to  
determine the exact number of persons who actually  
participated in the activities. The number of persons  
who participated in the activities is not known.



### III. MISCELLANEOUS EVALUATION

#### A. Disease

Two antelope were checked during the special season that had papilloma. This is the only evidence of disease reported.

#### B. Predation

None reported.

#### C. Tagging

None.

### IV. SUMMARY OF DATA

- A. The population was down slightly from 1964, but was well above the thirteen-year average.
- B. The ratios of bucks and kids per hundred does were lower than 1964, and were below the twelve-year average.
- C. A special antelope hunt was held in Northeastern California. This is the second year in a row in which a hunt has been held.

Table I

#### Winter Aerial Census in Northeastern California

<u>Year</u>	<u>Total Counted</u>	<u>*Erratic Winter Populations</u>	<u>Basic California Population</u>
1954	2,022	172	1,850
1955	2,155	180	1,975
1956	2,338	0	2,338
1957	2,080	107	1,973
1958	2,165	0	2,165
1959	1,917	0	1,917
1960	1,961	181	1,780
1961	2,071	162	1,909
1962	2,354	35	2,269
1963	2,498	123	2,375
1964	2,613	0	2,618
1965	2,468	0	2,468

\*Erratic winter population, occupying interstate ranges east of the Warner Mountains, subtracted from the total, leaves the basic California population.



# III. MISCELLANEOUS EVALUATION

## A. Disease

The samples were checked during the special census that had been taken. This is the only evidence of disease reported.

## B. Production

None reported.

## C. Land Use

None.

# IV. SUMMARY OF DATA

- A. The population was down slightly from 1964, but was well above the thirteen-year average.
- B. The number of beds and kids per hundred down were lower than 1964, and were below the thirteen-year average.
- C. A special census was held in Northeastern California. This is the second year in a row in which a census has been held.

Table 1

Special Census Results in Northeastern California

Year	Total Counted	Special Census Population	Ratio California Population
1964	2,652	112	1,540
1965	2,722	110	1,612
1966	2,712	9	2,703
1967	2,070	107	1,963
1968	2,122	0	2,122
1969	1,912	0	1,912
1970	1,701	121	1,580
1971	2,071	122	1,949
1972	2,324	32	2,292
1973	2,442	122	2,320
1974	2,812	0	2,812
1975	2,482	0	2,482

Special census population, compared with population  
that of the Special Census, subtracted from the total  
leaves the ratio California population.



# NEVADA ANTELOPE STUDIES

Table II

## Antelope Herd Composition Summary

<u>Year</u>	<u>Population</u>	<u>Bucks: Does: Kids</u>			<u>No. Classified</u>
1954	1,850	58	100	94	689
1955	1,957	52	100	77	1,020
1956	2,338	51	100	57	927
1957	1,973	58	100	66	861
1958	2,165	59	100	70	1,390
1959	1,917	46	100	53	1,496
1960	1,780	32	100	39	1,079
1961	1,909	44	100	64	1,042
1962	2,269	39	100	42	1,493
1963	2,375	44	100	62	1,721
1964	2,618	47	100	57	1,918
1965	2,463	44	100	52	1,592

The greater count obtained in Unit 1C may be due to shifting of antelope from adjacent areas in California. This herd has increased over 100% since 1963.

Census data is shown in Table I.

### B. Back-Doer Ratio

Census data last spring showed there to be 294 bucks and 1,978 does in the herd. This gives a ratio of 27 bucks per 100 does. Summer herd composition counts indicated a ratio of 36 bucks per 100 does. This ratio has ranged from 27 to 38 over a six year period as shown in Table II.

### C. Production

Summer aerial and ground surveys indicated a ratio of 48 kids per 100 does which is approximately the same as 1964. A total of 1,238 antelope were classified. Though this may be considered poor production for antelope, if all kids survived to yearlings substantial increases to the herd would result. Production data is shown in Table II.

### D. Harvest

The 1965 hunting season ran from August 26 through September 3. A total of 190 tags were available and hunters reported a harvest of 346



Table II  
Anselopa Hard Composition Summary

Year	Yield (lb)	Moisture (%)	Protein (%)	No. Transferred
1982	2,482	44	100	52
1983	2,316	43	100	57
1984	2,372	44	100	62
1985	2,358	39	100	62
1986	1,606	44	100	64
1987	1,780	37	100	39
1988	2,217	46	100	57
1989	2,162	52	100	70
1990	1,973	50	100	62
1991	2,318	51	100	57
1992	1,957	52	100	77
1993	1,826	52	100	84
1994	1,727	52	100	84
1995	1,727	52	100	84
1996	1,727	52	100	84
1997	1,727	52	100	84
1998	1,727	52	100	84
1999	1,727	52	100	84
2000	1,727	52	100	84
2001	1,727	52	100	84
2002	1,727	52	100	84
2003	1,727	52	100	84
2004	1,727	52	100	84
2005	1,727	52	100	84
2006	1,727	52	100	84
2007	1,727	52	100	84
2008	1,727	52	100	84
2009	1,727	52	100	84
2010	1,727	52	100	84
2011	1,727	52	100	84
2012	1,727	52	100	84
2013	1,727	52	100	84
2014	1,727	52	100	84
2015	1,727	52	100	84
2016	1,727	52	100	84
2017	1,727	52	100	84
2018	1,727	52	100	84
2019	1,727	52	100	84
2020	1,727	52	100	84



# NEVADA ANTELOPE STUDIES

## PROGRESS REPORT, 1965

William W. Foree  
Fish and Game Agent II  
Nevada Fish and Game Department  
Winnemucca, Nevada

### Herd Surveys

#### A. Annual Census

Aerial surveys in late winter and early spring resulted in a count of 1,372 antelope. This was 14% more than were counted in 1964. This herd has increased by one third since 1962 and probably has close to 1,500 antelope at the present time.

Substantially greater counts were obtained in northern Washoe County on two units. Units 1B and 1C showed count increases of 25% and 45% respectively from 1964. The greater count obtained in 1B may be due to the fact that some of these antelope summer in Unit 1A and had not yet returned to this unit when the count was made. There are always fewer antelope in Unit 1A in the winter than in the summer. The reverse is true in Unit 1B.

The greater count obtained in Unit 1C may be due to shifting of antelope from adjacent areas in California. This herd has increased over 100% since 1963.

Census data is shown in Table 1.

#### B. Buck-Doe Ratio

Census data last spring showed there to be 294 bucks and 1,078 does in the herd. This gave a ratio of 27 bucks per 100 does. Summer herd composition counts indicated a ratio of 36 bucks per 100 does. This ratio has ranged from 27 to 38 over a six year period as shown in Table II.

#### C. Production

Summer aerial and ground surveys indicated a ratio of 46 kids per 100 does which is approximately the same as 1964. A total of 1,216 antelope were classified. Though this may be considered poor production for antelope, if all kids survived to yearlings substantial increases to the herd would result. Production data is shown in Table II.

#### D. Harvests

The 1965 hunting season ran from August 26 through September 6. A total of 190 tags were available and hunters reported a harvest of 146



NEVADA ANTELOPE STUDIES

PROGRESS REPORT, 1963

William W. Farnsworth  
Fish and Game Agent II  
Nevada Fish and Game Department  
Winnemucca, Nevada

Field Notes

A. Antelope Canyon

Antelope Canyon is late winter and early spring season in a  
year of 1963. This was 1963 more than were counted in 1962.  
This herd has increased by one third since 1961 and probably has close  
to 1,500 antelope at the present time.

Substantially greater counts were obtained in northern Washoe  
County on two dates. Unit 1B and 1C showed count increases of 15% and  
45% respectively from 1962. The greater count obtained in 1B may be due  
to the fact that some of the antelope summer in Unit 1A and had not yet  
returned to this unit when the count was made. There are always fewer  
antelope in Unit 1A in the winter than in the summer. The reverse is true  
in Unit 1B.

The greater count obtained in Unit 1C may be due to shifting of  
antelope from adjacent areas in California. This herd has increased over  
100% since 1962.

Current data is shown in Table I.

B. Wolf-Pack Herd

Current data last spring showed there to be 294 packs and  
1,078 does in the herd. This gave a ratio of 3.7 packs per 100 does.  
Summer herd composition counts indicated a ratio of 3.6 packs per 100 does.  
This ratio has ranged from 3.7 to 3.8 over a six year period as shown in  
Table II.

C. Production

Summer aerial and ground surveys indicated a ratio of 4.6 packs  
per 100 does which is substantially the same as 1962. A total of 1,219  
antelope were observed. Though this may be considered poor production  
for antelope, it all adds up to a healthy and substantial increase in the  
herd would result. Production data is shown in Table II.

D. Harvest

The 1963 hunting season ran from August 15 through September  
30. A total of 190 tags were available and hunters reported a harvest of 140



antelope for a success of 77%. Antelope with horns longer than ears were legal in most units. In Unit 1C an either-sex season was held. This was done mainly to eliminate unnecessary restrictions and allow for hunters mistakes and not for management purposes. From a total of 32 antelope killed in this area, two does were reported shot by mistake in running herds. This type of season may be repeated next year possibly to include all three units in northern Washoe County.

Harvest data is shown in Table III.

## II. Range Surveys

### A. Weather - Precipitation

Precipitation has averaged above normal for the past three years. Much of it has occurred during the late spring and early summer months. During this same period, mean temperatures have been below normal. Precipitation during the summer and early fall has been below normal. Prolonged periods of wet, cold weather during the kidding season may have some affect on survival.

### B. Range Modification

The rapid rate of fence construction before antelope adapt to it is cause for concern since fences definitely obstruct migrations.

Chemical treatment of large sagebrush areas on key antelope wintering areas could create problems since this plant species is used to a great extent during this time of year and is available while other species are covered with snow.

The Bureau of Land Management, in cooperation with a rancher, constructed 25 miles of sheep-tight fence between two antelope units during the past year. This action was protested, but without success. The rancher now plans to fence his entire allotment in this manner.

Rest rotation grazing is gaining interest in range management on Bureau of Land Managementlands. This type of range management will undoubtedly benefit antelope if anything will, since it requires complete rest from livestock grazing periodically for a year or more. This allows plants to increase in vigor and produce a seed crop.

Observations indicate that sagebrush moth infestation has slackened in northern Washoe County. In Humboldt County, the area hardest hit was the Owyhee Desert where infestation occurred in small patches throughout the area. Over-all infestation of sagebrush by this moth in Nevada would have to be considered light. Under these conditions it is doubtful if there has been any harmful effects on wildlife, particularly antelope. Instead, any effects it has had may become beneficial in the future.

Range adjudications by the Bureau of Land Management are almost complete in the Winnemucca District. Livestock reduction ranging







from 25% to 75% has been put into effect. Once these areas are adjudicated they are intensively managed.

A 40% livestock reduction has been put into effect in Units 1B and 1C in northern Washoe County. This includes the Granite Range, Buffalo Hills and Smoke Creek areas.

C. Range Evaluation

Additional moisture has caused improvement in plant vigor. All forage species exhibited increased annual growth. Utilization by livestock continues heavy on key areas. Important forage species have increased in density little, if any. Range trend continues down. There has been an abundance of annuals. Water distribution has been excellent the past year. By developing springs and using plastic pipe, the Bureau of Land Management has improved water distribution. This should effect a better distribution of use of range forage.

III. Miscellaneous Evaluation

A. Disease

No evaluation made the past year.

B. Predation

Predators, particularly coyotes, are believed to be increasing. Buffer species, on the other hand, appear to have decreased. This situation may well explain the low kid crops experienced the past two years.

A five (5) year program of intensive predator control by the Bureau of Sport, Fisheries and Wildlife in the Kings River Unit is now in its second year. From July 1964 to the 1965 kidding season, 40 coyotes and 4 bobcats were taken in this unit by trapping and aerial catch. No coyotes were observed in this unit by control workers just prior to and during the kidding season. The kid crop in this unit was better than in any other unit in 1965 and was almost twice that in comparison to Unit 1A where no predator control is done. Although results of this program have been encouraging, they are by no means conclusive at this time.

IV. Summary of Data

1. Nevada's interstate antelope herd has increased by one-third since 1962. Most of this increase has occurred in the Smoke Creek Unit.
2. Antelope production continues poor. It has remained at 45 kids per 100 does the past two years.
3. Antelope hunter success is increasing and was 77% the past year.
4. Range modifications are progressing at a rapid rate. These must be continually evaluated to determine effects on wildlife.



from 1952 to 1955 has been put into effect. Once these areas are established they are immediately managed.

A 4000 acre tract has been put into effect in 1955. It is in the northern Washington County. This includes the Cascade Range, the Blue Ridge and the Great Smoky Mountains.

### C. Range Evaluation

Additional information has caused improvement in plant vigor. All forage species exhibited increased annual growth. The amount of the stock continues to be on very close. Important forage species have been identified. Range trend continues down. There has been an abundance of animals. Water distribution has been excellent the past year. By developing ranges and using plastic pipe, the Bureau of Land Management has improved water distribution. This should affect a better distribution of use of the range.

### III. Miscellaneous Evaluation

#### A. Range

The evaluation made the past year.

#### B. Range

The evaluation, particularly regarding the range, was made the past year. The evaluation, particularly regarding the range, was made the past year.

A 1955 year program of intensive research conducted by the Bureau of Land Management and the State of Washington. The program was designed to evaluate the range and to determine the best way to manage and develop it. The program was designed to evaluate the range and to determine the best way to manage and develop it. The program was designed to evaluate the range and to determine the best way to manage and develop it.

#### IV. Summary of Data

The data indicates that the range has increased by one-third since 1952. The data indicates that the range has increased by one-third since 1952.

The data indicates that the range has increased by one-third since 1952. The data indicates that the range has increased by one-third since 1952.

The data indicates that the range has increased by one-third since 1952. The data indicates that the range has increased by one-third since 1952.

The data indicates that the range has increased by one-third since 1952. The data indicates that the range has increased by one-third since 1952.



5. Additional moisture has improved plant vigor but plant density has improved little.
6. The fact that predators have increased and buffer species decreased may explain low kid crops experienced the past two years. Intensive control in one unit has shown some encouraging results which are by no means conclusive.

#### V. Recommendations

##### A. Hunts

Continue harvest of antelope on a quota basis by unit. Keep trophy idea going even in either-sex hunts.

##### B. Predator Control

Continue intensive control in Kings River Unit and other areas as necessary.

##### C. Range

Cooperate with land management agencies on all projects which will improve wildlife habitat and oppose all projects believed to be detrimental to wildlife.

Unit	Number Hunted	Quota	Dec	Kids	100 Days	100 Days
New Year's Lake	40	29	73			
Hart Camp	60	31	84			
Snake Creek	40	32	80			
Summit Lake	10	8	36			
Kings River	15	10	67			
Santa Rosa	25	16	64			
TOTAL -	190	146	364			
1963	190	146	364			
1964	190	146	364			
1965	190	146	364			
1966	190	146	364			
1967	190	146	364			
1968	190	146	364			

TABLE III

#### Harvests

Unit	No. Tags	No. Harvested	% Harvest Success
New Year's Lake	40	29	73
Hart Camp	60	31	84
Snake Creek	40	32	80
Summit Lake	10	8	36
Kings River	15	10	67
Santa Rosa	25	16	64
TOTAL -	190	146	77
1963	190	146	77
1964	190	146	77
1965	190	146	77
1966	190	146	77
1967	190	146	77
1968	190	146	77



Additional molesters has improved plant vigor and plant density has improved little.

The fact that molesters have increased and plant vigor decreased may explain low bird crop experienced the past two years. Increased control in one unit has shown some encouraging results which are by no means conclusive.

#### Recommendations

##### Points

Continue harvest of spruce on a quota basis by unit. Keep trophy limit going even in either-sex units.

##### Pre-harvest Control

Continue intensive control in Kings River Unit and other areas as necessary.

##### Loggers

Cooperate with land management agencies on all projects which will improve wildlife habitat and approve all projects believed to be detrimental to wildlife.



TABLE 1

## Population Trend

Unit	1961	1962	1963	1964	1965
New Year's Lake	199	179	179	179	108
Hart Camp	411	394	394	444	554
Smoke Creek	162	145	145	221	322
Summit Lake	68	57	68	68	78
Rings River	123	143	142	142	155
Santa Rosa	225	110	151	151	155
TOTAL	1,188	1,028	1,079	1,205	1,372

TABLE II

## Herd Composition

Unit	Number Classified	Bucks	Does	Kids	Bucks per 100 Does	Kids per 100 Does
New Year's Lake	311	51	193	67	26	35
Hart Camp	380	106	198	76	54	38
Smoke Creek	318	64	159	95	40	60
Summit Lake	41	8	25	8	32	32
King's River	50	4	28	18	14	64
Santa Rosa	116	8	67	41	12	61
TOTAL -						
1965	1,216	241	670	305	36	46
1964	1,245	232	699	314	33	45
1963	961	174	458	329	38	72
1962	663	104	379	180	27	48
1961	832	153	445	234	34	52
1960	652	125	355	172	35	48

TABLE III

## Harvests

Unit	No. Tags	No. Harvested	% Hunter Success
New Year's Lake	40	29	73
Hart Camp	60	51	86
Smoke Creek	40	32	80
Summit Lake	10	8	80
Kings River	15	10	67
Santa Rosa	25	16	64
TOTAL -			
1965	190	146	77
1964	190	137	72
1963	185	109	59
1962	175	104	59
1961	210	131	62
1960	190	119	62



TABLE I

## Population Trend

Unit	1961	1962	1963	1964	1965
New Year's Lake	199	179	179	179	108
Hart Camp	411	394	394	444	321
Smoke Creek	161	145	145	151	353
Summit Lake	68	87	68	68	78
King's River	153	163	145	145	155
Santa Rosa	225	119	181	181	155
TOTAL	1,188	1,038	1,079	1,205	1,371

TABLE II

## Herd Composition

Unit	Number Classified	Boys	Does	Kids	% per 100 Does	% per 100 Kids
New Year's Lake	111	51	193	61	56	32
Hart Camp	389	106	198	75	54	38
Smoke Creek	218	64	190	94	40	60
Summit Lake	41	8	52	8	35	35
King's River	59	4	58	18	14	64
Santa Rosa	116	8	69	41	15	61
TOTAL - 1965	1,216	247	870	305	36	66
1964	1,247	235	899	314	31	45
1963	961	176	658	259	38	73
1962	663	104	379	180	37	48
1961	833	161	665	224	34	65
1960	683	153	356	175	35	48

TABLE III

## Harvests

Unit	No. Tags	No. Harvested	% Hunter Success
New Year's Lake	40	29	73
Hart Camp	66	51	86
Smoke Creek	40	33	80
Summit Lake	10	8	80
King's River	15	10	67
Santa Rosa	25	16	64
TOTAL - 1965	196	146	74
1964	190	137	72
1963	185	109	59
1962	175	104	59
1961	210	131	62
1960	190	119	63



## OREGON ANTELOPE REPORT, 1965

Ira D. Luman, Chief of Big Game  
Oregon State Game Commission

### I. Herd Surveys

#### A. Annual Census

Aerial inventories covering approximately 4,000 miles of census route indicated an average of 1.6 antelope per mile of travel. This is a slight increase over the average of 1.4 antelope per mile in 1964. Actually, there has been little change in population trends over the past 10 years, but antelope numbers remain well below the early 1950 average of over two animals per mile.

Table 1 summarizes trends by herd range and hunting areas. In all, 5,859 antelope were tallied in 1965 on 3,755 miles of aerial route.

#### B. Buck-Doe Ratios

The 1965 herd composition shows an average of 31 bucks per 100 does, which is considerably below the 1964 average of 48 bucks per 100 does. The total of 1,491 animals classified consisted of 269 bucks, 879 does, and 343 fawns. Table 2 illustrates composition by county and Table 3 presents a 16-year average. As shown in Table 3, both the buck-doe and fawn-doe ratios for the past few years are far below those of the early 1950's.

#### C. Production

Fawn production was very poor in 1965, with only 39 fawns per 100 does as shown in Table 2. This is about 1/3 of the 1950 production and is the lowest recorded. Drouth appears to be the chief limiting factor influencing production and survival. It is hoped that the good moisture year of 1965 will beneficially affect the 1966 fawn crop.



OREGON ANTelope REPORT, 1962

Ira B. Luman, Chief of Big Game  
Oregon State Game Commission

I. Hard Antelope

A. Annual Census

Antelope inventories covering approximately 4,000 miles of census route indicated an average of 1.6 antelope per mile of travel. This is a slight increase over the average of 1.4 antelope per mile in 1961. Actually, there has been little change in population trends over the past 10 years, but antelope numbers remain well below the early 1950 average of over two animals per mile.

Table 1 summarizes trends by hard range and hunting season. In all, 5,829 antelope were killed in 1962 on 2,755 miles of antelope range.

B. Buck-Doe Ratio

The 1962 hard range census shows an average of 34 bucks per 100 does, which is considerably below the 1961 average of 48 bucks per 100 does. The total of 1,491 animals classified consisted of 259 bucks, 839 does, and 393 fawns. Table 2 illustrates comparison by county and Table 3 presents a 10-year average. As shown in Table 2, both buck-doe and fawn-doe ratios for the past few years are far below those of the early 1950's.

C. Production

Fawn production was very poor in 1962, with only 39 fawns per 100 does as shown in Table 3. This is about 1/3 of the 1950 production and is the lowest recorded. Growth experts in the chief limiting factor influencing production and survival. It is hoped that the good moisture year of 1963 will beneficially affect the 1964 fawn crop.



#### D. Harvest

For the 1965 season, 675 tags were issued on six hunting areas which included all of southeast and part of south-central Oregon. Hunters reported a harvest of 369 antelope, based on 615 report cards returned. This is a slight reduction in tags and kill from the 1964 season. Table 4 presents the 1965 harvest by unit and area, and Table 5 shows a 16-year comparison of hunting returns. Hunter success shows little variation over the years, and the harvest is strictly a result of regulations.

Successful tag applicants must wait through a five-year period before reapplying.

### II. Range Surveys

#### A. Weather Conditions - Precipitation

Most typical antelope areas receive less than 10 inches of rainfall annually. January temperatures average from 5° to 20° and snowfall is light, while July temperatures may range from 85° to 100° F. Summer ranges, which vary from 4,000 to 8,000 feet in elevation, are very arid.

Recent years have been quite arid on most central and eastern Oregon ranges. Since some western states have indicated that a correlation exists between summer precipitations and antelope fawn production, this could well apply to Oregon's fawn crop.

Spring precipitation in 1965 was light until June, when rains began and good amounts were received most of the summer. This was too late to produce needed early spring grass, but has greatly promoted browse growth. Range conditions prior to June were generally regarded as poor on central and south-eastern Oregon ranges.

#### B. Range Modification

The severe Aroga larval infestation has continued on through the past year, causing damage of varying degrees to sagelands on much of eastern Oregon's antelope ranges. Although estimates of plant losses are very difficult to obtain, they range from minimal



For the 1965 season, 675 tags were issued to the hunting areas which included all of southeastern and part of south-central Oregon. Hunters reported a harvest of 150 antelope, based on all reported kills returned. This is a slight reduction in tags and kills from the 1964 season. Table 6 presents the 1965 harvest by unit and area, and Table 7 shows a 16-year comparison of hunting seasons. Hunter success shows little variation over the years, and the harvest is strictly a result of regulations.

Successful tag applicants must wait through a five-year period before reapplying.

## II. Range Survey

### A. Weather Conditions - Precipitation

Most typical antelope areas receive less than 10 inches of rainfall annually. January temperatures average from 25 to 35, and snowfall is light, while July temperatures may range from 85 to 100. F. Summer ranges, which vary from 5,000 to 8,000 feet in elevation, are very arid.

Drought years have been quite arid on most central and eastern Oregon ranges. Since some western states have indicated that a correlation exists between summer precipitation and antelope range production, this could well apply to Oregon's own ranges.

Spring precipitation in 1965 was light until June, when rains began and good amounts were received most of the summer. This was too late to produce needed early spring grass, but has greatly promoted brown growth. Range conditions prior to June were generally regarded as poor on central and southern Oregon ranges.

### B. Range Utilization

The heavy grass forest infestation has continued on through the past year, causing damage of varying degrees to antelope on many of eastern Oregon's antelope ranges. Although estimates of plant losses are very difficult to obtain, they range from minimal



to the Columbia River, and from the Idaho border to portions of the west side of the Cascades. Present range covers only a part of this original habitat after mismanagement changed bunchgrass ranges into browse types in the late 1800's and the early part of this century.

Game managers are now watching with great interest the changes brought about by larval infestations and by sagebrush spraying and subsequent reseeding to crested wheatgrass by the BLM.

In a study of seasonal food habits of the Oregon pronghorn antelope involving Oregon, Idaho California, and Nevada, it was shown that browse constituted 68.8 percent of the volume consumed followed by 20.9 percent forbs, and 7.0 percent grass. Grass was utilized in the greatest volume during fall (13.2 percent), then spring (9.2 percent), followed by winter (5.7 percent). (Yoakum, 1958.)

Over 300 transects have been set up on southeastern Oregon ranges to evaluate the effect of large-scale range rehabilitation practices on antelope, deer, sage grouse, and chukar partridges. These will be sampled before and after extensive sagebrush spraying, which is part of the BLM's Vale project.

### III. Miscellaneous Evaluation

#### A. Diseases, Parasites, and Poisoning

Diseases and parasites appear to be only minor limiting factors in antelope mortality. Of 70 blood samples collected from 1954 through 1956 for tests of Brucellosis and Leptosperosis, all findings were negative. There is little evidence of any widespread disease factor in Oregon's antelope herds.

Parasitic infestations noted in Oregon's antelope have not seemed heavy enough to be the direct cause of mortalities. Liver flukes (Fasciola hepatica), tapeworms (Moniezia expansa), and the intestinal worm (Ostertagia trifurcata) have all been found in Oregon's antelope herds. Rocky Mountain spotted fever ticks (Dermacentor andersoni) and the winter tick (Dermacentor albipictus) are included in



to the Columbia River, and from the Idaho border  
to portions of the west side of the Cascades.  
Present range covers only a part of this original  
habitat after management changes had been  
made into crown types in the late 1800's and  
the early part of this century.

These managers are now working with great  
interest the changes brought about by forest  
management and by suggested spraying and subsequent  
reseeding to create what is known by the BLM.

In a study of seasonal food habits of the Oregon  
ground squirrel involving Oregon, Idaho,  
California, and Nevada, it was shown that between  
1951 and 1952, 68.5 percent of the volume consumed  
was followed by 20.7 percent forbs, and 7.0 percent  
grain. Grass was utilized in the greatest volume  
during fall (17.5 percent), then spring (9.5 per-  
cent), followed by winter (7.7 percent). (Tamm,  
1955.)

Over 100 thousands have been seen on or near  
certain Oregon ranges in evidence the effect of  
large-scale range rehabilitation practices on  
wildlife, deer, sage grouse, and other mammals.  
There will be a marked before and after contrast  
apparent spraying, which is part of the BLM's  
program.

## III. Microbiological Evaluation

### A. Diseases, Parasites, and Pathology

Diseases and parasites appear to be only minor  
limiting factors in squirrel mortality. Of 70  
sided samples collected from 1951 through 1952 for  
tests of Brucella and Leptospira, all find-  
ings were negative. There is little evidence of any  
widespread disease factor in Oregon's squirrel range.

Parasitic infestations noted in Oregon's squirrels  
have not seemed heavy enough to be the direct cause  
of mortality. Liver flukes (Fasciola hepatica),  
lungworms (Lungworm), and the intestinal  
worm (Nippostrongylus brasiliensis) have all been found in  
Oregon's squirrel range. Heavy mortality reported  
from the (Lungworm) and the (Nippostrongylus)  
side (Lungworm) are limited to



## 1965 AERIAL ANTELOPE INVENTORY

Unit Area	Herd Range	Miles Traveled	Antelope Observed	Antelope Per Mile					
				1965	1964	1963	1962	1961	1960
Maury		325	451	1.4	2.8	3.8	2.5	2.2	3.0
AREA I TOTALS		325	451	1.4	2.8	3.8	2.5	2.2	3.0
Paulina		200	303	1.5	1.9	1.8	1.2	0.6	0.6
Silver Lake		225	107	0.5	0.6	0.7	0.7	1.0	0.9
Wagontire		200	244	1.2	0.2	0.2	0.0	0.1	0.0
AREA II TOTALS		625	654	1.0	0.9	1.2	1.1		
Abert Rim		100	346	3.5	0.4	3.0	4.2	2.2	2.0
Warner		55	394	7.2	7.5	5.7	8.8	7.7	9.8
Interstate		75	126	1.6	1.2	1.8	1.0	1.0	1.2
Klamath		-	-	-	0.8	0.6	1.0	1.2	1.1
AREA III TOTALS		230	472	2.0	1.9	3.0	3.7	4.0	4.7
Hart Mountain	Hart Mountain	100	80	0.8	1.6	3.7	0.0	2.1	3.2
	Big Sprgs. Table	240	1,815	7.7	7.0	1.5	4.7	0.6	5.7
	Catlow Valley	270	408	1.5	1.8	1.2	1.6	0.8	1.5
	Fields Basin	50	0	0.0	0.7	0.7	0.9	0.0	1.7
	Sagehen Flat	240	0	0.0	0.0	3.2	0.0	2.6	0.0
AREA IV TOTALS		900	2,303	2.6	2.6	2.1	1.8	1.2	2.0
Juniper	Chain Lakes	160	102	0.6	0.2	0.7	0.3	0.2	0.4
	Foster Flat	80	81	1.0	1.2	1.4	0.4	0.5	0.0
		240	183	0.8	0.5	1.0	0.4	0.3	0.2
AREA V TOTALS		480	1,166	1.6	1.3	1.6	1.3	1.1	1.3
GRAND TOTALS		3,750	8,339	1.6	1.3	1.6	1.3	1.1	1.3







1965 AERIAL ANTELOPE INVENTORY *continued*

Unit Area	Herd Range	Miles Traveled	Antelope Observed	Antelope Per Mile					
				1965	1964	1963	1962	1961	1960
Steens	Alvord Desert	30	33	1.1	2.1	2.5	1.0	1.7	3.1
	Blitzen Valley	90	0	0.0	0.0	0.0	0.1	0.1	0.2
	Bridge Creek	40	22	0.6	0.8	1.0	0.8	1.4	2.1
	Red "S" Field	60	0	0.0	0.6	0.1	0.0	0.3	0.0
		<u>220</u>	<u>55</u>	<u>0.3</u>	<u>0.6</u>	<u>0.6</u>	<u>0.3</u>	<u>0.9</u>	<u>1.3</u>
AREA IV TOTALS		1,360	2,541	1.9	1.9	1.6	1.3		
Beulah	Brogan	50	57	1.1	2.1	1.0	0.8	1.3	1.3
	Harper	50	63	1.3	1.5	2.3	3.5	1.7	3.6
		<u>100</u>	<u>120</u>	<u>1.2</u>	<u>1.8</u>	<u>1.6</u>	<u>2.1</u>	<u>1.5</u>	<u>2.5</u>
Malheur	Harney Valley	50	92	1.8	0.6	1.5	0.3	0.2	0.4
	Coleman Mtn.	90	307	3.4	1.0	1.1	0.4	0.5	0.0
	Juntura	150	111	0.7	1.2	1.1	0.6	0.9	0.8
		<u>290</u>	<u>510</u>	<u>1.7</u>	<u>1.0</u>	<u>1.2</u>	<u>0.4</u>	<u>0.5</u>	<u>0.4</u>
Owyhee	Saddle Mountain	150	594	3.4	3.2	2.3	1.8	2.2	1.8
	Freezeout	75	29	0.4	0.6	0.4	0.3	0.1	0.4
	Mahogany	150	203	1.3	1.1	0.9	1.6	0.0	1.7
		<u>375</u>	<u>826</u>	<u>2.2</u>	<u>1.9</u>	<u>1.4</u>	<u>1.2</u>	<u>0.7</u>	<u>1.3</u>
AREA V TOTALS		765	1,456	1.9	1.5	1.3	1.0		
Whitehorse	Bowden Hills	250	276	1.1	1.0	1.0	0.8	0.4	2.1
	Sheephead	-	-	-	0.0	0.3	0.5	-	0.0
	Whitehorse	50	0	0.0	0.6	0.6	0.4	-	0.3
	Antelope Flat	50	0	0.0	0.0	2.8			
	Deer Flat	100	9	0.1	0.4	2.3			
AREA VI TOTALS		450	285	0.6	0.5	1.3	0.7	0.4	0.8
GRAND TOTALS		3,755	5,859	1.6	1.4	1.6	1.3	1.1	1.5







Table 2  
1965 ANTELOPE HERD COMPOSITION

County	Antelope Classified				Average Number Per 100 Does					
					1965		1964		1963	
	Bucks	Does	Fawns	Total	Bucks	Fawns	Bucks	Fawns	Bucks	Fawns
Crook-Deschutes	56	129	66	251	43	51	43	44	34	53
Harney	95	327	73	495	29	22	57	28	79	90
Lake	77	205	115	397	37	56	61	59	44	90
Malheur	41	218	89	348	19	41	40	58	31	53
Totals and Averages	269	879	343	1,491	31	39	48	51	40	66

Table 3  
ANTELOPE HERD COMPOSITION

Year	Bucks	Does	Fawns	Total	Per 100 Does	
					Bucks	Fawns
1965	269	879	343	1,491	31	39
1964	412	854	432	1,698	48	51
1963	355	887	581	1,823	40	66
1962	321	785	452	1,558	41	57
1961	214	770	347	1,331	28	45
1960	326	942	555	1,823	35	59
1959	393	806	361	1,560	50	45
1958	274	711	551	1,536	39	77
1957	203	608	493	1,304	33	81
1956	236	542	320	1,098	44	59
1955	194	455	268	917	43	59
1954	350	730	477	1,557	48	65
1953	417	950	589	1,956	44	62
1952	419	952	470	1,841	44	49
1951	334	694	417	1,445	48	60
1950	371	612	555	1,538	63	91







Table 4

## ANTELOPE HUNTING SEASONS

Year	Number of Hunters	Buck Kill	Percent Success
1965	612	369	60
1964	597	378	63
1963	578	333	58
1962	516	277	54
1961	814	418	51
1960	845	459	54
1959	812	451	55
1958	554	314	57
1957	543	294	54
1956	560	318	57
1955	570	358	63
1954	589	334	57
1953	380	181	48
1952	1,076	448	42
1951	1,133	600	53
1950	1,422	679	47



Table 1  
ANNUAL HUNTING RESULTS

Year	Number of Hunters	Game Kill	Percentage Success
1963	612	368	60
1964	597	378	63
1965	573	333	58
1966	518	337	64
1967	818	518	63
1968	842	529	62
1969	842	451	53
1970	534	318	59
1971	543	348	64
1972	568	318	56
1973	570	338	59
1974	588	338	57
1975	580	381	65
1976	1,078	648	60
1977	1,133	680	59
1978	1,322	673	50



Table 5  
1965 ANTELOPE SEASON  
(91% return)

Area	Units	Tags Issued	Reporting Hunters	Harvest	Percent Successful Hunters
I	Ochoco, Maury, Silvies, Murderer's Creek	100	84	42	50
II	Paulina, Wagontire, Fort Rock, Silver Lake	100	93	48	52
III	Warner	100	90	51	57
IV	Juniper, Hart Mountain, Steens	175	157	106	68
V	Beulah, Malheur River, Owyhee	100	90	57	63
VI	Whitehorse	100	98	65	66
TOTALS		675	612	369	60







## ANTELOPE STATUS REPORT

### SHELDON-HART MOUNTAIN NATIONAL ANTELOPE REFUGES Lakeview, Oregon

by

John D. Hill - Asst. Refuge Manager, Hart Mtn. Refuge  
O. V. Deming - Biologist

#### I. HERD SURVEYS

##### A. ANNUAL AERIAL CENSUSES

##### 1. Spring Herd Composition Count.

The spring herd composition count was made on April 26-27. A total of 1627 antelope were counted and 1604 classified, and that figure used for computing ratios and herd composition.

Figure 1

Spring Herd Composition Census

Area	1965					1964				
	B.	D.	Y.	Un.	Total	B.	D.	Y.	Un.	Total
Hart Mtn. Refuge	110	115	106	1	332	92	120	106		318
So. of Hart & Guano V.	7	14	5		26	6	14	13		33
Sheldon Refuge & Range	261	299	251		810	165	181	143	67	556
Massacre L. - Bitner	44	45	32		121	44	27	38		109
Sagehen	59	159	97	22	337	19	57	57		133
TOTALS	481	632	491	23	1627	326	399	357	67	1149

(1965) Total count - 1627

Classified - 1604

(1964) Total count - 1149

Classified - 1082

# ANNUAL STATUS REPORT

## SHILTON-EAST MOUNTAIN NATIONAL ANTelope RESERVE Jackson, Oregon

John H. Hill - Antelope Manager, Shilton-East  
Dr. V. Loring - Biologist

### 1. 1965 SUMMARY

#### A. ANNUAL ANTELOPE CENSUS

#### 1. Spring Antelope Composition Count

The spring antelope composition count was made on April 24-27. A total of 107 antelope were counted and 100 classified. Antelope were counted for composition and herd composition.

Figure 1

Spring Antelope Composition Census

Area	1965				1964			
	A	B	C	Total	A	B	C	Total
East Hill Range	100	100	1	201	95	100	100	295
East of East Hill Range	1	1	1	3	1	1	1	3
Shilton Range & Range	100	100	100	300	100	100	100	300
Shilton Range - 100	100	100	100	300	100	100	100	300
Shilton Range	100	100	100	300	100	100	100	300
TOTAL	301	301	301	903	296	296	296	888

(1965) Total count - 903  
(1964) Total count - 888



## 2. July Census and Kid Count.

The annual July census and kid count resulted in 1557 antelope counted with only 12 unclassified. The count was made July, 7-8-9.

Figure 2

### July Census and Kid Count

Area	1965				1964			
	B.	D.	Kid	Un.Total	B.	Doe	Kid	Un.Total
<b>Nevada</b>								
Sheldon Refuge & Range	240	394	143	777	165	326	224	715
Adjacent Units*	13	38	13	66	30	94	44	168
Sub-total	253	432	156	843	195	420	268	883
<b>Oregon</b>								
Hart Mtn. Refuge	55	85	50	200	77	170	112	359
Adjacent Units**	86	330	98	514	63	213	132	408
Sub-total	141	415	148	714	140	383	244	767
<b>GRAND TOTAL</b>	<b>394</b>	<b>847</b>	<b>304</b>	<b>1557</b>	<b>335</b>	<b>803</b>	<b>512</b>	<b>1650</b>

(\*) Massacre Lake - Bitner, Macy Flat.

(\*\*) So. of Hart Mtn. Refuge, Juano Valley, Sagehen-South Corral.

## B. BUCK-DOE RATIOS AND BASIS

### 1. Spring Herd Composition Counts and Ratios

Figure 3

	<u>1965</u>	<u>1964</u>
Antelope counted	1627	1149
Classified	1604	1082
Herd Composition		
Bucks	480	326
Does	632	399
Yearlings	491	357
Ratios		
Buck-Doe	76:100	81:100
Yearling-Doe	78:100	89:100
Yearling-Adult	44:100	49:100

## 2. July Census and Kid Count.

The annual July census and kid count resulted in 1957 antelope counted with only 12 unclassified. The count was made July 7-8-9.

Figure 2

## July Census and Kid Count

Area	1955		1956		1957	
	A.	B.	A.	B.	A.	B.
Novada						
Shoshone Range & Range	250	250	250	250	250	250
Adjacent Range	13	13	13	13	13	13
Sub-total	263	263	263	263	263	263
Grass						
North West Range	25	25	25	25	25	25
Adjacent Range	65	65	65	65	65	65
Sub-total	90	90	90	90	90	90
GRAND TOTAL	353	353	353	353	353	353

(a) Western Lake - Range, West West.  
(b) So. of West West Range, Jones Valley, Eastern-South Central.

## B. BRY-ONE RATING AND TABLE

### 1. Spring Hard Composition Counts and Rating

Figure 3

Rating	1955		1956		1957	
	A.	B.	A.	B.	A.	B.
Antelope counted						
Classified						
Hard Composition						
Basic						
Lean						
Younglings						
Rating						
Back-Down	10-100	10-100	10-100	10-100	10-100	10-100
Yearling-Down	10-100	10-100	10-100	10-100	10-100	10-100
Yearling-Adult	10-100	10-100	10-100	10-100	10-100	10-100



## 2. July Counts and Ratios

Figure 4

	1965	1964
<u>Sheldon Refuge and Range</u>		
Antelope counted	926	715
Classified	924	715
Bucks	247	165
Does	423	326
Kids	154	224
Ratios		
Kid-Doe	36:100	69:100
Kid-Breeding Doe	51:100	100:100
Buck-Doe	58:100	51:100
<u>Sheldon Biological Unit (Refuge &amp; Range, Sagehen, Massacre-Bitner)</u>		
Antelope counted	1245	1214
Classified	1241	1214
Bucks	294	240
Does	638	590
Kids	210	384
Ratios		
Kid-Doe	33:100	65:100
Kid-Breeding Doe	46:100	94:100
Buck-Doe	46:100	41:100
<u>Hart Mountain Refuge</u>		
Antelope counted	200	359
Classified	190	359
Bucks	55	77
Does	85	170
Kids	50	112
Ratios		
Kid-Doe	59:100	66:100
Kid-Breeding Doe	82:100	96:100
Buck-Doe	65:100	45:100
<u>Hart Mtn. Biological Unit (Refuge, south to Winnemucca Rd., Guano Valley)</u>		
Antelope counted	443	436
Classified	433	436
Bucks	101	95
Does	229	213
Kids	103	128
Ratios		
Kid-Doe	45:100	60:100
Kid-Breeding Doe	62:100	87:100
Buck-Doe	44:100	45:100





Oregon-Nevada Interstate Herd  
(Sheldon-Hart Mtn. Biological Units)

Antelope counted	1557	1650
Classified	1545	1650
Bucks	394	335
Does	848	803
Kids	304	512
Ratios		
Kid-Doe	36:100	64:100
Kid-Breeding Doe	50:100	92:100
Buck-Doe	46:100	42:100

C. PRODUCTION.

The carry-over of kids from the 1964 kid crop into the 1965 yearling age class was not as high as the previous year (Fig. 1). However, the ratio of 78 yearlings to 100 does in the spring count did show a very good carry-over of kids into the second year.

The spring of 1965, like that of 1964, showed every indication of being a good year for the antelope, with abundant food and water, but like 1964 the two refuges experienced hard, cold storms and temperatures during the kid drop and many new-born kids never did get dried off and warm before they died. Production appeared to be just as high as previous high years, but the survival into July was in some cases only 50% of last year. The wet days and nights in the 1965 kidding season were even more unfavorable for survival than those in 1964.

D. HARVEST. None

II. RANGE SURVEYS

A. WEATHER CONDITIONS.

1. Sheldon Refuge and Range.

Total annual precipitation, based on the growth year of September to August, was 17.97 inches, of which better than 25% came during late May and the first half of June. The 17.97 inches for the past growth year is over three times the 5.99 inches for 1958-'59 and is reflected by improved soil moisture and forage production.





Figure 5

Growth year Precipitation Records - Sheldon Headquarters

<u>Year</u>	<u>May</u>	<u>June</u>	<u>Annual</u>
1964-1965	1.36	3.53	17.97
1963-1964	1.45	3.77	13.85
1962-1963	1.83	1.48	16.52
1961-1962	2.96	.07	12.89
1960-1961	1.46	1.64	10.99
1959-1960	.99	.10	8.48
1958-1959	1.42	.29	5.99

2. Hart Mountain Refuge.

Total annual precipitation, based on the growth year was 16.36 inches. This is the third year of good moisture in a row, since we entered the wet half of the present sun spot cycle in 1961. As shown in Figure 6, increased precipitation over the 6.16 inches in 1961 has been the rule, rather than the exception. We can expect one or two dry years before 1970 or 1971, which is customary in a wet half of a sun spot cycle, but the ten year period will exceed in precipitation the amount received during the 1950-1960 period.

Figure 6

Growth Year Precipitation - Hart Mtn. Refuge Headquarters

<u>Year</u>	<u>May</u>	<u>June</u>	<u>Annual</u>
1964-1965	1.91	4.10	16.36
1963-1964	1.85	3.52	14.68
1962-1963	1.88	2.69	17.30
1961-1962	3.30	.09	9.57
1960-1961	1.00	.00	6.16

B. RANGE MODIFICATION.

1. Water Development.

a. Sheldon Refuge and Range.

The major water development was the Rock Springs Table reservoir project. Here we diverted by ditching, the flow from another drainage, repaired the dam, installed a new headgate, and dug a trench reservoir on the lakebed. The lakebed was then seeded to Western





Bureau of Land Management

wheatgrass. This will insure an almost permanent supply of water to the Hock Springs Table herd of antelope that has grown from about 60 animals in 1957 to 250 in 1965.

During the work on the ditch our antique tractor of 1938 vintage broke down for what is possibly the last time, and work came to a standstill. It was only through the fine and immediate cooperation of the Susanville District of the Bureau of Land Management that we were able to complete this project. They rushed their surveyor and a new D-8 to the scene and the project was completed.

During the past year a small spring on the south rim of Gooch Table was also developed for antelope and other wildlife use.

b. Hart Mountain Refuge.

An extensive water development was planned for Hart Mountain Refuge during the fall of 1965, but bad weather stopped the work before completion. However, we did get more done this fall than any other year we can remember. A total of 17 springs and seeps were improved by use of a backhoe, two trench reservoirs were dug on lakebeds, one trench reservoir constructed to catch snow-melt under a lava rim, and one dam constructed to catch spring runoff. All these improvements will contribute to better distribution of wildlife and livestock and in some cases result in better range utilization on areas undergrazed in the past due to lack of water.

2. Habitat Restoration.

a. Sheldon Refuge and Range

Chemical Spraying. Last spring 55 miles of roadside spraying totaling 220 acres, was done for control of invading sagebrush and rabbitbrush. This should slow down the rate of spread of brush into rangelands until we can attempt a large-scale brush control project.

b. Hart Mountain Refuge.

Chemical Spraying. Roadside spraying was also done at the Hart Mountain Refuge and in addition, aerial spraying of 1071 acres of sagebrush and 40 acres of rabbitbrush spraying was done to open up suppressed grass-forbs cover type.



Bureau of Land Management  
Library  
Bldg. 50, Denver Federal Center  
Denver, CO 80225

During the work on the ditch on the south side of 1938  
vertical lines down for what is possibly the last time  
and work was in a standard. It was only through the  
line and horizontal cooperation of the Bureau's District  
of the Bureau of Land Management that we were able to  
complete this project. They rushed their surveyor and  
a new 1-2 to the scene and the project was completed.

During the next year a small spring on the south side of  
the ditch was developed for water and other

project was planned for May  
of 1965, but bad weather  
prevented. However, we did  
then dig a ditch past the  
spring and some were improved  
French reservoirs were dug on  
the south side of the ditch and  
one was constructed to catch  
the improvements will continue  
of wildlife and livestock and  
water ways utilization on  
past the 1st of water.

During the fall of 1965  
was done for control of  
the ditch. This ditch was  
of French into the ditch and  
the ditch control project.

During the spring was also done at  
and in addition, aerial spray-  
ing was done in order of water-  
to open up the ditch.



C. RANGE EVALUATION.

Due to excellent moisture conditions the past three or four years, plus the effects of our range restoration projects, ranges on both refuges are in better forage condition than we have ever recorded the past 20 years. On some restoration projects there has been a three-fold increase of grass and forbs because of brush suppression. Untreated areas also responded through the increased soil moisture, but nothing like the treated areas. We even allowed some extra AUM's of grazing this year.

III. MISCELLANEOUS EVALUATION.

A. DISEASE.

None observed.

B. PREDATION.

Little evidence of predation was noted during the year, but this may have been somewhat influenced by the take of predators during the year. On the Sheldon Refuge and Range a total of 283 coyotes and 59 bobcats were taken during the year ending April 30. Aerial gunning in February accounted for 31 coyotes on the Sheldon Range and 180 coyotes immediately south of the Range.

The annual Sheldon pre-kidding gunning and denning took place on May 6 to 9. In 50½ hours of flying a total of 55 adult coyotes, 3 bobcats and 9 coyote pups were taken on, and adjacent to antelope kidding areas.

On Hart Mountain Refuge the pre-kidding aerial gunning and denning took place from May 3 to 5. During 20 hours of flying a total of 20 adult coyotes, 2 adult bobcats, four kittens and 17 coyote pups were removed.

During the May aerial control work ground crews collected all carcasses possible and on the two areas a total of 19 reproductive tracts were collected for examination by the Denver Laboratory of our Research Branch. Through a study of reproductive tracts the laboratory hopes to establish a normal reproduction pattern for coyotes in this area before embarking on an experimental Stibestrol control program on the Sheldon-Hart Mountain Refuges. Stomach contents of coyotes collected were examined and a frequent occurrence of embryo and adult sage grouse was noted.



